

REMARKS

In the Official Action mailed on **26 October 2005** the Examiner reviewed claims 22-28. Claim 22 was objected to because of informalities. Claims 22-28 was rejected under 35 U.S.C. §103(a) as being unpatentable over Hanson (*Global Optimization Using Interval Analysis*, hereinafter “Hansen”), in view of Schulte et al (*A Variable-Precision Interval Arithmetic Processor*, hereinafter “Schulte”).

Objections to the claims

Claim 22 was objected to because of informalities.

Applicant has amended claim 22 to correct the informalities noted by the Examiner. No new matter has been added.

Rejections under 35 U.S.C. §101, 35 U.S.C. §112, and 35 U.S.C. §102(b)

Independent claim 22 was rejected as being unpatentable over Hanson in view of Schulte. Applicant respectfully points out that Schulte teaches a **variable-precision arithmetic unit**, which allows the precision of a computation to be specified (see Schulte, Abstract). In order to perform interval computations, the arithmetic unit must be used multiple times. For example, performing interval addition requires **two variable-precision additions** (see Schulte, page 252, first full paragraph).

In contrast, the present invention uses an **integer arithmetic unit** which performs both additions simultaneously (see FIG. 3, and page 11, line 19 to page 12, line 13 of the instant application). While the variable-precision arithmetic unit of Schulte can perform integer operations (as can any arithmetic unit), the variable-precision arithmetic unit does not process both limits of the interval simultaneously. Processing both limits of the interval simultaneously is advantageous because the operation is performed in the time that the variable-precision arithmetic unit of Schulte can perform a single operation. There is

nothing within Hansen or Schulte, either explicit or implicit, which suggests using an integer arithmetic unit which performs both additions simultaneously.

Accordingly, Applicant has amended independent claim 22 to clarify that the present invention uses an integer arithmetic unit which performs both additions simultaneously. These amendments find support in FIG. 3, and on page 11, line 19 to page 12, line 13 of the instant application.

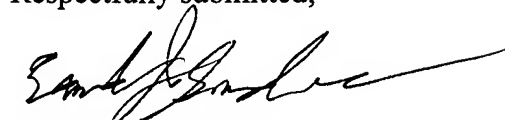
Hence, Applicant respectfully submits that independent claim 22 is in condition for allowance. Applicant also submits that claims 23-28, which depend upon claim 22, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

CONCLUSION

It is submitted that the present application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

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